Delta Sustainability
Accomplishments

Delta Sustainability

The Sacramento-San Joaquin Delta is the hub of the state's water supply system.

It is a unique and valuable estuary, home to threatened and endangered species; it supplies municipal and industrial water to 25 million people and irrigates more than 750,000 acres of the most productive agricultural land in the nation. Land within the Delta supports agriculture, recreation and tourism; and more than 500,000 people call the Delta home.

The Delta is also an ecosystem is in crisis. Under Governor Schwarzenegger's leadership, the Department of Water Resources (DWR) has implemented many projects and initiatives aimed at restoring the ecosystem and creating more sustainable Delta.

Non-Physical Barrier - An experimental, non-physical "Bubble Barrier" was installed at the confluence of the San Joaquin River and Old River in 2009 to prevent juvenile salmon, swimming down the San Joaquin River to the ocean, from going into Old River. The Bubble combines acoustics and a strobe-lit curtain of bubbles to create an underwater wall of light and sound that repels juvenile Chinook salmon and helps them to migrate successfully to the ocean.

The Stockton Deep Water Ship Channel Dissolved Oxygen project - Dissolved Oxygen (DO) concentrations in the Stockton Deep Water Ship Channel drop during warmer weather and lower water flow periods in the San Joaquin River, adversely affecting aquatic life, particularly salmon. The objective of this project is to maintain DO levels above the minimum recommended by State of California Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. The project includes an ongoing assessment of DO levels in the channel and a study of potential adverse effects of low oxygen on salmon.

Delta Risk Management Strategy - Levees in the Delta and Suisun Marsh are at risk of failing due to a variety of factors, including winter storms, high water, and earthquakes and the effects could be devastating to California's water supply and economy. DWR engaged a team of experts to evaluate the risks in the Delta Risk Management Strategy (DRMS). DRMS Phase 1 analyzed risks to levees and concluded that under business-as-usual practices, the Delta Region as it exists today is unsustainable. Phase 2 will propose a number of measures to reduce the risks and consequences of levee failures.

Subsidence Reversal/Carbon Sequestration Studies - Subsidence, the sinking of land surface levels, is a major problem on many Delta islands and the surface of many islands is now below sea level. Beginning in 1997, DWR and the US Geological Survey (USGS) cooperated in a study to identify its causes and remedies, which included the construction of 15 acres of wetlands, filled with tules and cattail. When the plants die at the end of each growing season, they decompose and begin to slowly build up the land surface elevation by stopping and reversing subsidence. Ongoing research has shown net surface elevation increases between 1.3 - 2.2 inches per year. These wetlands have the potential to help reverse subsidence on Delta islands and sequester carbon from the air. More studies will be conducted in the near future.

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